REMARKS

This application contains claims 1-54. Claims 1, 9, 16, 19, 28, 36, 43 and 46 are hereby amended. No new matter has been introduced. Reconsideration is respectfully requested.

Applicant thanks Examiners Brandt and Orgad for the courtesy of a personal interview with Applicant's representative, Daniel Kligler (Reg. No. 41,120), held in the USPTO on April 16. At the interview, Dr. Kligler presented a draft amendment to claims 1 and 19 and argued the patentability of the amended claims over the cited art. The proposed amendment to claim 19 added the limitation that the manager node is configured to receive uplink messages from the access points exclusively through the first port and to convey the uplink messages exclusively via the second port over the LAN to respective destination addresses. The Examiners agreed that this amendment would distinguish the claimed invention over the cited references. The proposed amendment to claim 1 specified that the manager node sends an instruction via the switch to the selected access point to transmit a response to the mobile station within a time limit specified by a WLAN protocol. The Examiners acknowledged Dr. Kligler's explanation of the distinction of this limitation over the cited references, but indicated that they would reconsider the references after filing of the formal amendment.

Claims 1-54 were rejected under 35 U.S.C. 103(a) over Bajic (U.S. Patent Application Publication 2003/0227893) in view of Melpignano et al. (U.S. Patent Application Publication 2003/0003912). Applicant has amended independent claims 1, 19, 28 and 46, as discussed in the interview, in order to clarify the distinction of the present invention over the cited art. Dependent claims 9, 16, 36 and 43 have been amended for proper

antecedence in view of the amendment to independent claims 1 and 28.

Claim 1, as amended, recites apparatus for mobile communication in which a plurality of access points in a WLAN share a common BSSID. Upon receiving an uplink packet, the access points convey messages over a LAN to a manager node via a switch. The manager node processes the messages so as to select one of the access points to respond to the uplink packet within a time limit specified by a predefined WLAN protocol. Meeting this time limit is problematic in the context of this sort of distributed operation, as explained in paragraphs 0010 and 0070 of US 2004/0156399 (the published version of this application). A number of specific solutions to this problem are described in the specification.

Bajic describes a network architecture in which a switch communicates with multiple repeaters, which communicate with mobile stations using the 802.11 WLAN protocol (paragraphs 0045-0047). The Examiner considered Bajic's switch 301 to be equivalent to the manager node in claim 1, and repeaters 302 to be equivalent to the access points. Bajic, however, neither teaches nor suggests that his switch could operate in the manner recited in claim 1 while meeting the time limit imposed by the 802.11 protocol. Bajic makes no explicit mention of any such time limit (although it appears that he is aware of the difficulty in meeting the time limit, as explained below).

Bajic describes two possible schemes for determining which repeater is to respond to a packet sent by a mobile stations:

1. "Distributed Receiver Diversity Approach" (paragraphs 0049-0064). In this approach, each repeater that receives the packet from the mobile station encapsulates the packet with its RSSI and broadcasts the encapsulated packet to the other repeaters

(paragraph 0053). Each repeater compares the RSSI in these packets with its own RSSI, and the repeater with the highest RSSI sends an acknowledgment packet to the mobile station (paragraphs 0055, 0062). In this scheme, in other words, the selection of the repeater that is to respond to the mobile station is made by each of the repeaters itself, and not by the switch, as would be required for equivalence with claim 1, according to the Examiner's own interpretation.

2. "Token-Based Receiver Diversity Approach" (paragraphs 0065-0078). In this case, the switch pre-assigns a token corresponding to each mobile station to a particular repeater (paragraph 0066). When the repeater holding the token for a given mobile station receives a packet from that mobile station, the repeater sends an acknowledgment packet to the mobile station. (There is no need for the repeater to send any sort of message to the switch or to receive instructions from the switch, since the repeater already has the token.) On the other hand, if the repeater with the token does not receive the packet cleanly from the mobile station, it will not send the acknowledgment, and the switch will have to move the token to another repeater.

In this latter case, Bajic makes clear that the switch is not able to cause the new repeater to respond within the time limit specified by the protocol. He states explicitly that the "packet will be forwarded to the switch and not acknowledged to the mobile client" (end of paragraph 0066, emphasis added). The new repeater will receive the token only in time to acknowledge the next packet that the mobile station transmits.

Thus, to summarize, Bajic does not teach or suggest that a manager node could select one of the access points and instruct this access point to transmit a response to

the uplink packet within a time limit specified by the WLAN protocol, as required by amended claim 1.

Melpignano describes radio communication arrangements in which a master unit (access point AP) holds information about the topology of a shared resource network. During handoff of a slave unit (mobile terminal MT) from one master unit to another, the first master unit activates a paging procedure by the second master unit (abstract). Thus, in contrast to the mode of operation recited in claim 1, each of Melpignano's mobile terminals communicates at any given time with only a single access point. As a result, Melpignano clearly could not teach or suggest the features of operation of the manager node that are set forth above.

Therefore, claim 1, as amended, is patentable over the cited art. In view of the patentability of claim 1, dependent claims 2-18 are also believed to be patentable.

Claims 28-45 recite methods for mobile communication based on principles similar to those implemented in the apparatus of claims 1-18. Independent claim 28 has been amended in like fashion to claim 1. Therefore, claims 28-45 are believed to be patentable, as well, for the reasons explained above.

Independent claim 19, as amended, recites apparatus for mobile communication in which a plurality of access points in a WLAN communicate over a LAN with a manager node via a switch. The manager node has a first port used exclusively for receiving uplink messages from the access points, and a second port used for conveying the messages to their destinations. This novel port configuration and its benefits are described in paragraph 0050 of the present patent application.

As was agreed in the interview, neither Bajic nor Melpignano suggests this sort of exclusive port assignment. In rejecting claim 19 as filed, the Examiner referred to the ports of Bajic's switch 301, but there is

no hint in Bajic of the sort of exclusive port assignment that is recited in amended claim 19. Therefore, claim 19, as amended, is patentable over the cited art, as are claims 20-27, which depend from claim 19.

Claims 46-54 recite methods for mobile communication based on principles similar to those implemented in the apparatus of claims 19-27. Independent claim 46 has been amended in like fashion to claim 19. Therefore, claims 46-54 are believed to be patentable, as well, for the reasons explained above.

Notwithstanding the patentability of the independent claims in this application, the dependent claims are also believed to recite independently-patentable subject matter. In the interest of brevity, however, Applicant will refrain from arguing the independent patentability of the dependent claims at present.

Applicant believes the amendments and remarks presented above to be fully responsive to all of the grounds of rejection raised by the Examiner. In view of these amendments and remarks, all of the claims in this application are believed to be in condition for allowance. Prompt notice to this effect is requested.

Respectfully submitted,
WELSH & KATZ, LTD.

By: Gerald T. Shekleton
Gerald T. Shekleton
Reg. No.: 27,466

WELSH & KATZ, LTD.
120 South Riverside Plaza
22nd Floor
Chicago, Illinois 60606
Telephone: (312) 655-1500

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5/14/07 Gerald T. Shekleton
Date Registration No. 27466
Attorney for Applicant(s)